

**REMARKS**

Claims 1-17 are pending in the application. Claims 1-17 are rejected.

Claims 1, 2, 5 and 6 are rejected under 35 USC 102(e) as being anticipated by Law (US Patent No. 6,064,699).

Claim 1 has been amended to more clearly point out that the amplifier and the speaker system are located separate from each other, as shown in Figure 1 and supported in the specification in the discussion of Figure 1. Law does not teach that there is a communications module in the speaker system that communicates back to the amplifier, nor does Law teach that any characteristics of the speakers are communicated, if such communication exists.

The office action states that "Law discloses a wireless speaker system comprising a receiver including an audio signal destination 210 that may refer to a speaker...a transmitter 100 including an RF modulator 140...The modulated signal is sent to the RF amplifier 170." However, in Law, Figures 1 and 2 and in column 3, line 48, through column 4, lines 51, the component 210 is part of a receiver 200, in Figure 2, and the other components, 100, 140 and 170 are part of the transmitter. Claim 1 is directed to a speaker system having a speaker and a communications module, where the communications module can communicate back to the amplifier. The only communications module that can communicate in any fashion in Law is the RF modulator 140, which is located in the transmitter, analogous to the amplifier of the instant application. The receiver 200 of Law does not have any communication origination capability.

Further, there is no communication of speaker characteristics in Law, much less any communication from the receiver back to the transmitter. The office action states, "In a preferred embodiment, a maximum of five separate audio sources will transmit signals the five audio sources may comprise the front (right, middle, and left) and the rear (right and left)

audio signals of a surround sound speaker system (column 1, line 20). It is obvious therefore that the information going into the transmitter contains some speaker characteristics.”

First, the audio sources are not the receivers, or speakers. As discussed in Law, at column 3, lines 10-16, “A plurality of audio sources may be connected to a single *transmitter* that is configured for *transmitting* a digital, analog, or a combination digital and analog audio signal *to an equal number of receivers*, preferably connected to *speakers* or other similar audio signal destinations.” Therefore, the five audio sources are being transmitted to speakers, possibly, but there is no indication that there is any communication from the *receivers to the transmitters*.

Second, the statement that “it is therefore obvious,” is improper. This claim has been rejected under 35 USC 102(e), the standard for which is that “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). There is no teaching of transmission from the receivers to the transmitter and there is no mention of any speaker characteristics.

It is therefore submitted that claim 1 is patentably distinguishable over the prior art and allowance of this claim is requested.

With regard to claim 2, as discussed above, Law does not anticipate all of the elements of claim 1. Law does not teach a wired connection, and in fact teaches directly away from a wired connection. See column 1, lines 20-38. It is therefore submitted that claim 2 is patentably distinguishable over the prior art and allowance of this claim is requested.

With regard to claim 5, as discussed above Law does not anticipate all of the elements of claim 1. Law does not teach a communications module at the speaker (receiver), so any discussion of the RF modulator is irrelevant, as the RF modulator is not located in the speaker, but in the transmitter. Further, while impedance may be a function of a modulator, this fails to meet the standard of anticipation, and there is no mention of high impedance. It is therefore submitted that claim 5 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claim 6 requires that the communications module of claim 1, *located at the speaker*, communicates with the amplifier. As Law teaches a communications module only located at the transmitter 100, which is analogous to the amplifier, Law does not anticipate all of the elements of claim 1. Further, CVSD is a type of modulation used to perform analog-to-digital conversion, it is *not* used for communication. In addition, whether the signal going into the RF modulator 170 of the transmitter 100 is irrelevant. There is no communications module located with the receiver 200 that communicates back to the transmitter, much less one that uses amplitude modulation, PSK or two-tone modulation. It is therefore submitted that claim 6 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claims 9 and 11 are rejected under 35 USC 102(b) as being anticipated by Larsen (WO 97/25833).

Larsen teaches a power amplifier that is directly connected to a loudspeaker that in turn is not 'located separate' from the amplifier. The estimator 12 merely provides a feedback signal. There is no communications module on the loudspeaker, and the estimator is not located in the speaker system. There is no speaker system, just a speaker. It is therefore submitted that claim 9 is patentably distinguishable over the prior art and allowance of this claim is requested.

With regard to claim 11, there is no 'transmission of information' from a speaker system to an amplifier. The estimator is no part of the speaker and does not 'transmit' information, it is merely a feedback loop. Further, the speaker is not located separate from the amplifier. It must be noted that the rejection was under 35 USC 102(b) and only included Larsen, yet the rejection states 'Law meets all elements.' Applicants assume that the Examiner meant Larsen. It is therefore submitted that claim 11 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claims 15 and 16 are rejected under 35 USC 102(e) as being anticipated by Konno (US Patent No. 6,282,296).

Similar to Larsen, Konno teaches a directly coupled feedback loop using microphones. The power amplifier is not located separate from the speaker. Further, if one were to extend the feedback from the microphones as being speaker characteristics, which it is not, it is ambient noise characteristics being fed back, it is not *static* characteristics as required by claim 15. The very nature of the microphones, the adder and the variable gain circuit are that they are dynamic, not static. It is therefore submitted that claim 15 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claim 16 is directed to the connection between the amplifier and the speakers being connected by wires, yet the amplifier and speakers are required to be located separate from each other. As discussed above, the power amplifier and speakers of Konno are co-located. It is therefore submitted that claim 16 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claim 3 is rejected under 35 USC 103(a) as being unpatentable over Law. The discussion in the office action is also directed to claim 8, so Applicants have assumed that claim 8 is included in this rejection.

As discussed at length with regard to claim 1, the connection between the RF modulator and the RF amplifier is irrelevant. These components are both located in the transmitter, which is analogous to the amplifier of claim 1. There is no communications module in the receiver of Law, which is analogous to the speaker system of claim 1. While Law does teach a wireless connection, there is no communications across any connection *from the speaker (receiver) to the amplifier (transmitter)*, so the nature of the connection is not shown, taught nor suggested by Law. It is therefore submitted that claim 3 is patentably distinguishable over the prior art and allowance of this claim is requested.

With regard to claim 8, there is no information transmitted from a communications module located at the receiving end back to the transmitting end in Law, much less one that is in a separate frequency band that overlaps the audio signal. The office action states, "It is indicative of the fact the audio signal and the information are being transmitted in the same band." There is no information being transmitted from the receiver to the transmitter, so there is no information being transmitted in a band that overlaps the audio signal. It is therefore submitted that claim 8 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claim 4 is rejected under 35 USC 103(a) as being unpatentable over Law in view of Konno et al. (US Patent No. 6,282,296).

As discussed above, Law does not meet all of the elements of claim 1, and the addition of Konno does not cure this deficiency, for the reasons as discussed with regard to claim 15. It is therefore submitted that claim 4 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claim 7 is rejected under 35 USC 103(a) as being unpatentable over Law in view of Zuquert (US Patent No. 6,466,832).

Law does not meet all of the elements of the claim, for the reason as described with regard to claim 1. Zuquert does add a transmitter at the speaker, but the transmissions back to the transmitter, analogous to the amplifier, are not about speaker characteristics. The transmissions from the speakers are about the quality of the connection between the speakers and the transmitter and about the information being received from the transmitter, such as dropped packets, etc. See the discussion at column 21, lines 13-27. Therefore, the combination of references does not teach a communication module at the speaker operable to transmit speaker characteristics back to the amplifier in a band separate from the audio signal. It is therefore submitted that claim 7 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claim 12 is rejected under 35 USC 103(a) as being unpatentable over Larsen in view of Konno.

As discussed above, Larsen does not teach the elements of claim 9. Konno does not teach amplitude modulation. Varying of a rate is frequency modulation, not amplitude modulation. A rate is typically expressed in cycles/second, or Hertz. Varying the Hz of a signal is frequency modulation. Therefore, the combination of references does not teach the elements of claim 12 and it is therefore submitted that claim 12 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claim 13 is rejected under 35 USC 103(a) as being unpatentable over Larsen in view of Setlabudi et al. (US Patent No. 5,609,487).

Larsen does not teach all of the elements of claim 9, as discussed above. The addition of Setlabudi does not cure the deficiency in Larsen of lacking a communications module located with a speaker separate from an amplifier. Adding a means of communication for a communications module that does not exist does not render the claim obvious. Therefore, it

is submitted that claim 13 is patentably distinguishable over the prior art and allowance of this claim is requested.

Claim 14 is rejected under 35 USC 103(a) as being unpatentable over Larsen. As discussed above, the feedback signal in Larsen is a voltage feedback signal fed directly from an estimator to a power amplifier, so there is no 'frequency band' of communication, much less a frequency band that overlaps an audio signal. The feedback signal of Larsen is actually combined with the audio signal received from the filter 8, so there are not two separate signals. It is therefore submitted that claim 14 is patentably distinguishable over the prior art and allowance of this claim is requested.

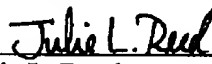
Claim 17 is rejected under 35 USC 103(a) as being unpatentable over Konno. As discussed above, Konno does not disclose a speaker and an amplifier being located separate from each other, nor does Konno address speaker characteristics. There can be no wireless connection between the amplifier and the speaker in Konno, as they are part of the same component. Therefore, it is submitted that claim 17 is patentably distinguishable over the prior art and allowance of this claim is requested.

No new matter has been added by this amendment. Allowance of all claims is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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